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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/729,515  | 12/04/2000  | Herbert W. Sullivan  | PA1671US            | 9494             |
| 22830   | 7590        | 05/04/2005           | EXAMINER            |                  |
| CARR & FERRELL LLP<br>2200 GENG ROAD<br>PALO ALTO, CA 94303 |             |                      | ANYA, CHARLES E     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2194                |                  |

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/729,515

Applicant(s)

SULLIVAN ET AL.

Examiner

Charles E. Anya

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 1/31/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-8 are pending in this application.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,629,152 82 to Kingsbury et al. in view of U.S. Pat. No. 4,901,230 to Chen et al.**

4. As to claim 1, Kingsburg teaches a processing system for performing addition and subtraction ("...AFADD()...AFSUB()..." col. 9 Ln. 42 - 53) within limits upon a shared value comprising: means for performing a first uninterruptible operation upon the shared value stored in an affected reservation location, the first uninterruptible operation using an operand (Mailbox Data Structure 70 Col. 7 Ln. 23 - 65, Col. 10 Ln. 26 - 27); means for performing a second uninterruptible operation to restore the affected reservation location if the resulting value of the first uninterruptible operation is not within the range defined by the upper value and lower value (Step 94 Col. 10 Ln. 32 - 40); means for

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performing a third uninterruptible operation to update an actual value location if the resulting value of the first uninterruptible operation is within the range defined by the upper value and lower value (Step 104 Col. 10 Ln. 58 - 61; a set of indicators manipulatable by an atomic operation; col. 4, lines 26 - 36) and means for performing a fourth uninterruptible operation to update an unaffected reservation location if the resulting value of the first uninterruptible operation is within the range defined by upper value and lower value (Step 98 Col. 10 Ln. 41 - 50) and means for reporting a success if the resulting value of the first uninterruptible operation is within the range defined by upper value and lower value ("...return SUCCESS..." Col. 9 Ln. 1 - 15).

5. Kingsbury is silent with reference to teaching a means for comparing a resulting value of the first interruptible operation stored in the affected reservation location to an upper value and lower value to determine if the resulting value is within a range defined by the upper value and lower value that can be changed; and means for reporting a failure if the resulting value of the first uninterruptible operation is not within the range defined by the upper value and lower value.

6. Chen teaches a means for comparing a resulting value of the first interruptible operation stored in the affected reservation location to an upper value and lower value to determine if the resulting value is within a range defined by the upper value and lower value that can be changed (figure 16 Col. 17 Ln. 19 - 25, Range Checking 620 - 623 Col. 17 Ln. 60 - 63) and means for reporting a failure if the resulting value of the first uninterruptible operation is not within the range defined by the upper value and lower value ("...abort..." Col. 17 Ln. 19 - 25, 60 - 67).

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7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chen and Kingsbury because the teaching of Chen would improve the system of Kingsbury by providing a general purpose multiprocessor system for multitasking applications involving vector processing, whereby a plurality of processors share a central or shared memory organized in interleaved memory banks which may be accessed independently and in parallel during each machine clock period (Chen Col. 3 Ln. 43 – 53).

8. As to claim 2, Kingsbury teaches the first, second, third, and fourth uninterruptible operations as LOCK XADD operations ("...exchange and add (ADD)..." "...instruction..." Col. 9 Ln. 17 - 53).

9. As to claims 3, 5, 7 and 8, see the rejection of claim 1.

10. As to claims 4 and 6, see the rejection of claim 2.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

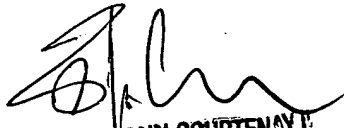
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3757. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles E Anya  
Examiner  
Art Unit 2194

cea.



ST. JOHN COURTENAY  
PRIMARY EXAMINER